

EDWARDS (W<sup>m</sup> A.)

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## DEDUCTIONS FROM NINETY-ONE (91) CASES OF RHEUMATISM,

BEING A CONSIDERATION OF THE REPORT OF THE COMMITTEE ON THE

## COLLECTIVE INVESTIGATION OF DISEASE

OF THE

## MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

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The study of disease by the collective method is of value in direct proportion to the number and character of the replies that are received. When we compare the report of the above committee to that of the committee of the British Medical Association, in which, for instance, 1066 cases of pneumonia are tabulated, it will at once become apparent how extremely valuable these reports may be made when vast numbers of cases are recorded from which reliable conclusions can be derived; still a careful perusal of these ninety-one cases will amply repay one for the time and thought expended.

Sex appears to have presented a direct predisposing cause to the disease, as of the cases reported 58 were males and 32 females,\* thus again establishing the well-known statement of the books that acute rheumatism is more frequent in men than in women, an undisputed fact for many years, as Hippocrates in his *Aphorisms* states that women are less liable than men; but as we shall see later, the report seems to disprove the statement that this is due to the fact that men are more exposed to the influences producing it, and not because of a greater susceptibility to the disease; we shall also see that the greatest number of cases are recorded among "housekeepers," an occupation in

which it would be an extremely difficult matter to establish any special relation to rheumatism. Again, among the males we find that the greatest number of cases are recorded among "farmers," once more a business that is not nearly so exposed as others recorded in the report, and would not seem to offer such a predisposing environment as, for example, an "ironmonger," a "puddler," a "miner," or a "daily laborer." It would most certainly seem that an occupation that entailed protracted exposure in damp apartments (miner), or exposure of the body to cold or wet when in a perspiring state (puddlers), would be a decided exciting cause; yet the report does not bear this out, but it does show in a striking manner the frequency with which rheumatic attacks follow ordinary exposure to cold or to chilling the superficies of the body in those of the rheumatic diathesis.

The rationale of these attacks would seem to be that during the use of the body, *i. e.*, the muscles, lactic acid and acid potassium phosphate are produced, and when the body is chilled, the elimination of these matters is stopped, hence an accumulation occurs, and with it the resulting rheumatic outbreak. It is proper to state, however, that Reyher\* does not regard the accumulation of the

\* One case sex not stated.

\* Virchow's Arch., vol. xxi., p. 85, quoted by Bartholow.

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acid in the blood as a cause of rheumatism, Prout and Richardson, however, are as firm advocates of the affirmative side of the question, the latter having demonstrated the fact that injections of lactic acid are followed by endocarditis, and that its medicinal administration in diabetes has in various instances apparently caused a rheumatic inflammation of the joints.

The relation of the *use and abuse of alcohol* in its various forms to the disease is of sufficient importance to claim our attention.

While the returns in this matter are not as full or concise as we all would desire, still they are sufficient for the purpose, and show that restriction in the use of alcoholic stimulants is requisite to the welfare of a rheumatic. Sir Thomas Watson so aptly remarks that the instances are not few of men of good sense and masters of themselves, who, being warned by one visitation of the gout, have thenceforward resolutely abstained from rich living and from wine and strong drink of all kinds, and who have been rewarded for their prudence and self-denial by complete immunity from any return of the disease, or upon whom at any rate its future assaults have been few and feeble. "I am sure it is worth any *young* man's while who has had the gout to become a teetotaler."

To return to the report, we find that four (4) of the males are recorded as "intemperate," and that none of the females are so recorded. Thirty-four cases are stated to be "total abstainers," and fifty-one cases "temperate." The nature of the attack in these cases would show to a certain extent the effect or non-effect of alcohol upon the disease.

Of the total abstainers, we find that eleven were subjected to a moderate attack and thirteen to a severe. Of the fifty-one temperate cases, twenty had a moderate attack and thirty-one a severe. Of the alcoholics (four) one had a moderate attack and three a severe.

In one temperate case and in one total abstainer the nature of the attack is not stated.

To consider this matter more closely, we notice an apparent contradiction in the fact that of the non-alcoholics nearly twice as many are noted to have had a severe attack as compared to those recorded as "moderate;" this is due to the small number of returns, as when we compare the nature or the attack in the intemperate, we find the ratio of severe to moderate as *one* is to *three*.

It seems, then, to be established, by this report, that over-indulgence in alcoholic liquors will, if associated with certain other conditions already referred to, undoubtedly give rise to or be a decided ætiological fac-

tor in the production of an acute attack of rheumatism.

It does not seem to be of much importance which of the liquors are used, but the amount of alcohol contained therein is of great significance. The mischievous effect of liquors appears to be in direct proportion to the amount of alcohol which they represent; it is a somewhat general statement that the stronger wines, as port, sherry, and madeira, are much more injurious in this respect than the lighter wines, as hock, sauterne, or moselle. By many, malt liquors are considered the most injurious, but the question as to which is the most or least desirable is still *sub judice*.

An inquiry regarding the *food* elicits the fact that of the ninety-one cases, but one had "insufficient" recorded. This patient, a woman, æt. 46, housekeeper, had been exposed to wet and cold a few days before the attack, which was moderate in character, lasting ten days, from which she made a perfect recovery, with, however, a slight persistence of the disease in three joints.

The effect of climate upon the disease, as shown by the report, is that the greatest number of cases occur in "high, dry, exposed" localities, with the atmosphere "damp, wet, and cold," and with the wind blowing from either the west or northwest; this, remember, is the climatology of Pennsylvania alone in relation to the disease, as the cases are taken from the various towns, cities, boroughs, villages, and hamlets throughout the State.

Among the *predisposing* causes may also be added exposure to over-fatigue which occurred in sixteen males and five females; in four of the former and two of the latter the fatigue was sudden. Shock preceded the attack four times—three times in males and once in females.

*Age* appears to bear no particular relation to the disease, as the youngest case was nine months, and the oldest sixty years. Again, a severe attack is noted in a child æt. ten months, and a mild one in a man æt. sixty years. The investigation of the condition of the *peri- and endocardium* in the series of cases becomes indeed an interesting part of our study. The known tendency of the rheumatic poison to these membranes, let it be what you will, adds renewed interest to their consideration.

The condition of the circulatory apparatus was noted in twenty-four cases, an extremely small relative proportion, if it represents the true relation of the occurrence of cardiac complications in the ninety-one cases.

In fourteen instances was the pericardium attacked; twice was the mitral valve diseased. One observer notes "a distinct murmur during the attack, with apex beat lowered to seventh interspace." Four cases are recorded as having "heart disease, before, during, and after attack, with pericarditis, murmur, and lowering of apex beat." Two cases of murmur following the attack are placed on record. One case of pericarditis, which existed previous to the attack, was not apparently affected by the rheumatic complication. One somewhat extraordinary case is noted of "pericarditis only during attack, with lowering of apex beat."

The cutaneous system was but rarely affected; the following skin eruptions are recorded: Erythema 2, eczema 2, and one example of these eruptions: papular, blebs, herpes, sudamina, furuncles, roseola (after attack). Subcutaneous nodules are recorded as occurring but in seven (7) cases.

Without further comment upon special symptoms, we will proceed to a consideration of the methods of *treatment* pursued by the various observers. That most usually advocated is the general plan of therapeutics, comprised under the somewhat comprehensive term of "alkaline." Salicylic acid and the salicylates, followed by, or combined with quinine, seems to have been a very efficacious combination. Salicylate of ammonia is an alkali worthy of special mention, on account of the happy combination of the two drugs, particularly in asthenic cases. The iodide of potassium was exhibited in many cases with

apparent happy results. One reporter is an advocate of frequent catharsis; another, of vapor baths. Again, we note the advocacy of cold sponge baths; leeches were also applied. The efficacy of dietetics was proven by the frequent happy recourse to a "milk diet." Mercurial inunctions and the faradic current in two instances appeared to prove beneficial. Tincture of the chloride of iron during convalescence, in many instances, apparently hastened a more speedy return to the normal blood crasis. An observer reports that "the rheumatic list in the materia medica" was exhibited to his patient without any apparent amelioration of the symptoms. Again, a plan of treatment styled as "anti-rheumatic," is reported. Opium was in many cases the keystone of the treatment; indeed, few cases are recorded in which the drug was not exhibited at some time during the course of observation.

The following drugs are reported as having been used with varying success, and upon scanning the list we will notice that the drugs exhibited are almost as numerous as the number of cases recorded: Digitalis, gaultheria, soda biborat., sulphite of soda, iron, cod liver oil, vin. colchicum, pulv. ipecac et opii, pot. carb., magnesia sulph., jaborandi, aconite, veratrum viride, nitrate, citrate, and acetate of potash, lemon juice, fluid extract cimicifuga, hydriodic acid, potas. et sodæ tart., hyoscyamus, gelsemium, mass, hydrarg., fl. ext. manaca, guiac. citrate lithia, sulph. codeia, coto bark.

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